

DWR CYMRU WELSH WATER - PONTSTICILL WTW

Analysis of water clarification sludge cake

Sampling Point No: 300991

Sample ID: 8613404

Date: 28/11/2025

Application rate (t/ha)	70.0
Application rate (t/acre)	28.3
pH	6.7
Dry solids (%)	18.20

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	1.05	0.19	%	1.9	134	0.2	13
Ammonium N	33.7	6.13	mg/kg	0.0	0		
Phosphorus (P)	1600	291.20	mg/kg	0.3	20		
Phosphate (P ₂ O ₅)		0.00		0.7	47	0.1	9
Potassium (K)	239	43.50	mg/kg	0.0	3		
Potash (K ₂ O)		0.00		0.1	4	0.0	1
Magnesium (Mg)	202	36.76	mg/kg	0.0	3		
Magnesium (MgO)		0.00		0.1	4	0.0	1
Sulphur (S)	2120	385.84	mg/kg	0.4	27		
Sulphur (SO ₃)		0.00		1.0	68	0.1	7

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	33.8	6.15	mg/kg	6.15	0.43	15.00	3%
Copper	21.4	3.89	mg/kg	3.89	0.27	7.50	4%
Nickel	14	2.55	mg/kg	2.55	0.18	3.00	6%
Lead	17	3.09	mg/kg	3.09	0.22	15.00	1%
Cadmium	0.3	0.05	mg/kg	0.05	0.00	0.15	3%
Chromium	11.8	2.15	mg/kg	2.15	0.15	15.00	1%
Arsenic	24.6	4.48	mg/kg	4.48	0.31	0.70	45%
Mercury	0.27	0.05	mg/kg	0.05	0.00	0.10	3%
<u>Other Elements</u>							
Iron	2480	451.36	mg/kg	451.36	32		
Aluminium	65500	11921.00	mg/kg	11921.00	834		

Sampling Point No:	300991	Location:	PONTSTICILL WTW SLUDGE TANKERING POINT
Date Sampled:	28/11/2025	Time Taken:	09:42
Laboratory:	ALS	Sample ID:	8613404
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results

Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	202	mg/kg		
288 Aluminium	65500	mg/kg		
357 Arsenic	24.6	mg/kg		
4620 pH	6.7	pH		
7774 Mercury	0.27	mg/kg	<	
8241 Volatile solids	46.9	%		
9233 Ammoniacal nitrogen	33.7	mg/kg	<	
9234 Sulphur	2120	mg/kg		
9271 Cadmium	0.30	mg/kg	<	
9272 Chromium	11.8	mg/kg	<	
9273 Copper	21.4	mg/kg	<	
9275 Nickel	14.0	mg/kg	<	
9276 Lead	17.0	mg/kg	<	
9277 Zinc	33.8	mg/kg	<	
9278 Iron	2480	mg/kg		
9281 % Dry solids	18.2	%		
9282 % Minerals	53.1	%		
9283 % K (dry weight)	0.0239	mg/kg	<	
9284 % P (dry weight)	0.160	%	<	
9285 % N (dry weight)	1.05	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - PONTSTICILL WTW

Analysis of liquid water clarification sludge

Sampling Point No: 300991

Sample ID: 8613402

Date: 28/11/2025

Application rate (t/ha)	250.0
Application rate (t/acre)	101.2
pH	6.7
Dry solids (%)	3.62

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	1.16	0.04	%	0.4	105	0.0	10
Ammonium N	169	6.12	mg/kg	0.0	2		
Phosphorus (P)	3200	115.84	mg/kg	0.1	29		
Phosphate (P ₂ O ₅)		0.00		0.3	66	0.1	13
Potassium (K)	477	17.27	mg/kg	0.0	4		
Potash (K ₂ O)		0.00		0.0	5	0.0	1
Magnesium (Mg)	504	18.24	mg/kg	0.0	5		
Magnesium (MgO)		0.00		0.0	8	0.0	2
Sulphur (S)	5000	181.00	mg/kg	0.2	45		
Sulphur (SO ₃)		0.00		0.5	113	0.0	11

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	67.4	2.44	mg/kg	2.44	0.61	15.00	4%
Copper	42.8	1.55	mg/kg	1.55	0.39	7.50	5%
Nickel	28	1.01	mg/kg	1.01	0.25	3.00	8%
Lead	34	1.23	mg/kg	1.23	0.31	15.00	2%
Cadmium	0.69	0.02	mg/kg	0.02	0.01	0.15	4%
Chromium	23.6	0.85	mg/kg	0.85	0.21	15.00	1%
Arsenic	62.1	2.25	mg/kg	2.25	0.56	0.70	80%
Mercury	0.55	0.02	mg/kg	0.02	0.00	0.10	5%
Other Elements							
Iron	5570	201.63	mg/kg	201.63	50		
Aluminium	162000	5864.40	mg/kg	5864.40	1466		

Sampling Point No:	300991	Location:	PONTSTICILL WTW SLUDGE TANKERING POINT
Date Sampled:	28/11/2025	Time Taken:	09:41
Laboratory:	ALS	Sample ID:	8613402
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results

Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	504	mg/kg		
288 Aluminium	162000	mg/kg		
357 Arsenic	62.1	mg/kg		
4620 pH	6.7	pH		
7774 Mercury	0.55	mg/kg	<	
8241 Volatile solids	54.3	%		
9233 Ammoniacal nitrogen	169	mg/kg	<	
9234 Sulphur	5000	mg/kg		
9271 Cadmium	0.69	mg/kg		
9272 Chromium	23.6	mg/kg	<	
9273 Copper	42.8	mg/kg	<	
9275 Nickel	28.0	mg/kg	<	
9276 Lead	34.0	mg/kg	<	
9277 Zinc	67.4	mg/kg	<	
9278 Iron	5570	mg/kg		
9281 % Dry solids	3.62	%		
9282 % Minerals	45.7	%		
9283 % K (dry weight)	0.0477	mg/kg	<	
9284 % P (dry weight)	0.320	%	<	
9285 % N (dry weight)	1.16	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit
